United States v. W.R. Grace & Co., et al., No. 01-72-M-DWM (D. Mont.)
90-11-2-07106/2

Deposition (by Plaintiff) of Richard J. Lee

Deposition Exhibits 706 - 707

Vol. 1 of 2 (includes previously marked Exhibits 214, 219 & 307)

PART I

Q. What is this, by the way?
A. This is a document, I think the --
This is a document prepared by the National Stone Association and its representatives in order to help people understand who are not in the aggregate industry what the difference between asbestiform and cleavage -- rock-forming amphiboles are, and what information is available and the health effects.
Q. Did you assist in the preparation in this document?
A. Yes. I provided the photographs and the characterization data for the document.
Q. Okay. I don't see anywhere where it mentions the National Stone Association. Is that the correct name?
A. I'll stand corrected. Kelly Bailey is the lead guy preparing it, and it was originally prepared by Vanderbilt, and I think this is an updated version, and I thought it was the National Stone Association, but it may or may not be.
Q. Is that known formally as the National Stone and Gravel Association? Is that the full name?

sixth or fifth -- sorry, the sixth page. Is that correct?

A. That's correct.

Q. And it's a handwritten chart. Is that right?

A. That's right.

Q. And in the first sample there, which is Sample 3030274, the percentage of asbestiform tremolite is reported at 1.4 percent. Is that right?

A. That's correct. This is 500-micron fraction.

Q. Correct, greater than 3,500 microns in diameter?

A. Right.

Q. And the cleavage fragments tremolite or the cleavage tremolite is reported at 0.1 percent. Right?

A. Yes.

Q. In that sample, there was a significantly higher amount of asbestiform tremolite than cleavage tremolite. Right?

A. As reported.

Q. Right. In the second sample below that, it's reported that the asbestiform tremolite was 2.9 percent by weight, and that cleavage tremolite was 1.8 percent by weight. Is that

A. Yes.
Q. And that's not surprising, is it?
A. No. What might surprise you is how extraordinarily small the content is.
Q. When you say "the content," you're referring to the content of the particles less than 500 microns?
A. Well, that is not really surprising when you understand the nature of the process, the nature of the process to separate the fine particles out; so, I mean, you're selling the coarse material, shipping a coarse material. So it might surprise some people that there's only that percent or half a percent or something of dust, but I don't think that --

I think given the -- particularly the date, given the building, that Libby amphiboles gotten when you actually analyze it, there's only trace amount of ZAI of respirable fibers, fibers that would present any kind of potential for generating asbestos exposure. It might surprise some people.

MR. RESTIVO: Rob, my suggestion, and it's your deposition, is we take a five-minute break and then go until about 12:30, and let

fraction.

Q. I think you indicated earlier in the fine fraction that it's composed of fine asbestos fibers and bundles. Is that correct?

A. I indicated that in there fine respirable fibers and bundles do occur in the respirable fracture in minute amounts.

Q. Dr. Lee, in your report, you indicate in your report -- in your report, you comment on observations made by Hatfield and Longo in their report concerning friability. Is that correct?

MR. RESTIVO: Can we have a page reference?

MR. TURKEWITZ: Page 27, second paragraph.

BY MR. TURKEWITZ:

Q. You state in your report, claimants' experts allege the amphibole particles found in ZAI are highly friable and readily pulverize into respirable fibers, i.e., they are indistinguishable from asbestos.

Although claimants' experts cite W.R. Grace's literature in support of their position, the Grace documents actually were

lines down on the right, it asked whether the sample is homogenous, and it says right. Right?

A. Yes.

Q. Below that to the right is an area where you could describe what you're seeing as far as the types of materials or minerals are there. Correct?

A. Yes.

Q. Okay. It circled vermiculite opaques. What does that mean?

A. Opaques are things you can't see through.

Q. All right. Then down below where it says -- below that, it has asbestos type, and there is tremolite actinolite. Correct?

A. Yes.

Q. That's .5 percent. That's reported. Correct?

A. I'm on the wrong sheet. What sample are you on? The one I happen to have is two five.

Q. It's the first PLM worksheet on the analysis.

A. Right.

Q. The Sample 3030274? If you hand that to me, I'll find it for you.

A. I have six three. That's the first --

Q. There you go.

same. If you go down and look at all of these, you don't see anywhere where nonasbestiform amphiboles are reported. Is that correct?

A. That's correct.

Q. You indicated earlier that part of the goal of this exercise, this testing, was to determine the presence and amount of the asbestiform and the nonasbestiform Libby amphiboles. Correct?

A. It certainly did that in the course. You asked me both. In the fine, he did point count. I don't see any indication that he reported any cleavage fragments.

Q. So you don't know? As far as we know, there were no cleavage fragments in that fine material that was analyzed. Correct?

A. None reported. Correct.

Q. All right. You mentioned that cleavage fragments or cleavage comes from rock, and that cleavage fragments occur when there's breakage of the rock. Is that correct?

A. That's correct.

Q. And when cleavage fragments break off, what appearance do they have? What is the appearance of the cleavage fragments? How do they come? I think you mentioned before

bulk sample that was -- that showed the structures greater than one micron, did you?

A. No.

Q. And the method that you used, the Wylie method that you used, talks about using it where the width increases with length as one of the criteria, does it not?

A. Basically the discriminate function separates out things where the width is increasing with length.

Q. Was that intended to apply to bulk sample analysis?

A. I believe she originally did it for bulk sample analysis, sure.

Q. It was not intended to apply for air sample analysis. Is that correct?

A. I don't know that. I would say no. I don't know what Wylie intended. I know what she did.

Q. Are you aware of any organization that has approved the use of that method using air samples, using data from air samples?

A. No.

Q. Are you aware of any scientific literature where it has been approved for use for air samples?

Q. Dr. Lee, you mentioned before that you did work involving Libby --

Did you work in the case -- strike that.

You testified earlier that you consulted as an expert for W.R. Grace in the case brought against Grace by EPA and Libby. Is that correct?

A. Correct.

Q. And you made these same arguments regarding cleavage fragments in that case, did you not?

A. Yes.

Q. And EPA rejected those arguments, did they not?

A. I think that's a fair characterization, that's right, at least the individuals involved in EPA, yes.

Q. And what is the United States Geological Survey?

A. It is what it is.

Q. They also rejected your arguments, correct, regarding cleavage fragments?

A. No. I don't think USGS rejects that.

Q. They disagreed with your opinions. In fact, there was a -- Greg Meeker of the USGS actually wrote a rebuttal to your opinions. Is that

Q. Okay. Did you look at -- well, strike that.
You understand that -- and I think you said before, you agree with me that most of the cleavage fragments are greater than one micron in diameter.
MR. RESTIVO: Most of what cleavage fragments?
THE WITNESS: Right.
MR. RESTIVO: I kind of lost track what he's talking about.
BY MR. TURKEWITZ:
Q. The vast majority of cleavage fragments found in nature are greater than one micron in diameter. Correct?
A. Depending on where -- what media you're looking at, correct.
Q. And I think we're looked at the OSHA 1992 document, and I think it mentioned that Wylie found approximately 80 percent of the cleavage fragments with widths greater than one micron.
A. Let's not confuse things. Those are all in bulk samples. It's counting all cleavage fragments, not counting respirable fibers longer than five microns.
Q. And you did not chart cleavage fragments from a